

REMARKS

The Examiner is thanked for the performance of a thorough search.

STATUS OF CLAIMS

Claims 1-28 are in the case. No claims are amended. No new matter is introduced.

DRAWINGS

The Examiner objected to the drawings as failing to comply with 37 CFR § 1.84(p)5 for not showing interface 303 on FIG. 4. Accordingly, a new FIG. 4 is submitted with this Response showing interface 303. Therefore, the objection to the drawings is obviated, and the Examiner is respectfully requested to withdraw this objection.

THE SPECIFICATION

The Examiner objected to the specification because “322” on page 11, line 3 should be “332.” The specification is amended accordingly herein. Therefore, the objection to the specification is obviated, and the Examiner is respectfully requested to withdraw this objection.

CLAIM REJECTIONS – 35 U.S.C. § 102

The Examiner rejected claims 1-4, 12-17 and 25-28 under 35 U.S.C. §102(e) as allegedly anticipated by Bare U.S. Patent No. 6,493,318 (Bare). The rejection is respectfully traversed.

Regarding independent claim 1, the Examiner cited FIG. 29, column 6, lines 20-40, and column 8, lines 25-50, and alleged that Bare

discloses a method for determining a logical path in a managed network between a source device and a destination device at a data link layer (Fig. 29, col. 6, lns. 20-40, col. 8, lns. 25-50) ...

Perhaps the Examiner was not relying on FIG. 29 for the teaching of “determining a logical path,” and perhaps the Examiner would agree that FIG. 29 does not teach “determining a logical path.” However, in the above statement, the Examiner did not explain which of FIG. 29, col. 6, lines 20-40, and column 8, lines 25-50 are being relied on for teaching which of “determining a logical path,” a “managed network,” “a destination device,” “a data linked layer” or any of the other features mentioned. However, in case the Examiner is in fact relying on FIG. 29 to teach “determining a logical path,” please note that Bare states (column 10, lines 5-8),

FIG. 29 depicts a network of switches operable in accordance with the present invention and host systems wherein VLAN standard switching techniques are integrated with the load balancing protocols of the present invention.

Thus, Bare’s brief description of FIG. 29 does not mention anything about “determining a logical path,” and therefore Bare does not characterize FIG. 29 as showing “determining a logical path.” Further, there is no clear depiction in FIG. 29 of determining a logical path. Similarly, regarding column 6, lines 20-40, Bare discusses (column 6, lines 22-27),

providing network switch devices and associated switch to switch protocols which permit the operation of multiple links throughout the network involving multiple switches, and which provide for improved utilization of the aggregate bandwidth of all paths in the network....

There is no explicit discussion in column 6, lines 20-40, of finding “a[n individual] logical path” as recited in the claim 1. Also, although column 8, lines 25-50 mention a “cost calculation” and use the phrase “load balance,” there is no explicit disclosure of “determining a[n individual] logical path.” The load balancing of column 6, lines 20-40,

and column 8, lines 25-50, is apparently achieved by increasing the number of links that are in use, which does not appear to require the determination of an individual path.

The Examiner (on page 3, line 2 of the Office Action) associated Bare's "load balance domain" with the claimed "Connected Group Space." However, Bare refers to "switches which are in a load balance domain" (column 6, line 43), "switches in a load balance domain" (abstract lines 2 and 3), and "switches in the load balance domain" (abstract lines 4 and 5), indicating that the load balance domain is a collection of the physical hardware within which the load balancing will be performed, and not a "space" in the mathematical sense. Possibly, Bare uses the word "domain" because the hardware may be associated with an IP address.

In contrast, a "space" is a collection of points used to describe an entity. The word "representation" in the phrase "Connected Group Space representation" and the clause "based on a topology space representation" of claim 1 indicates that the word "space" is used in the mathematical or topological sense, and not to refer to a physical domain. Consequently, in contrast to the Examiner's assertions, in the passages cited by the Examiner, Bare does not teach (and certainly does not explicitly disclose) "creating or storing" the load balance domain, in contrast to claim 1, lines 4 and 5. Although the Examiner refers to a "cost...representation" (page 3, line 6) and associates it with a "topology space" it is not clear where Bare discloses any "space." Although in column 8, lines 25-50, cited by the Examiner, Bare discusses costs and cost calculations it is not clear that Bare has the "cost representation" alleged by the Examiner or that a cost representation would be a "topology space" or a "Connected Group Space." In column 8, lines 25-50, Bare does not explicitly disclose using costs for representing anything other than costs.

The Examiner also cited column 6, line 30, through column 7, line 25, which is nearly a column long. The length of this citation makes it difficult to determine precisely how the Examiner is applying it to specific claim features. Clarification is respectfully sought regarding the specific lines relied upon and which features are allegedly shown. Although these columns discuss storing cost information in switches (see for example column 7, lines 14-17 and 23-26), there is no discussion of storing individual optimized paths or of “transforming” between spaces.

The Examiner stated, in the last sentence of the paragraph bridging pages 2 and 3,

The load balance domain is the list of possible nodes and links for the data to traverse, and the topology space representation would be the restricted set of nodes and links that represent the lowest cost paths.

However, this statement is speculation about what a load balance domain is. Such speculation does not meet the Examiner’s burden of proof to show that every feature claimed is identically disclosed in the reference relied upon in a rejection under 35 USC § 102.

Moreover, a network can be described using topological entities or Connected Groups. Mathematically, a collection of points is a “space.” In a topology space, topological entities are the points that make up the collection of points (the space) used to describe the network, while in a Connected Group Space connected groups are the points used to describe the same network. In the claimed method, identifying an optimized path is performed in the Connected Group Space, but then the result is transformed into topology space. This concept of transforming between spaces is missing from the passages of Bare relied on by the Examiner. Further, Bare is concerned with finding multiple paths to be used simultaneously in order to increase bandwidth, rather than determining any individual optimum paths.

Independent claims 14, 27, and 28 contain the steps discussed above regarding claim 1, and are therefore allowable for at least the same reasons. Claims 2-4, 12, 13, 15-17, 25 and 26 indirectly or directly depend from one of claims 1, 14, 27 and 28, and are therefore allowable for at least the same reasons. In addition, each of Claims 2-4, 12, 13, 15-17, 25 and 26 introduces one or more additional features that independently render it patentable. However, due to the fundamental differences already identified, to expedite the positive resolution of this case a separate discussion of all such features is not included at this time.

CLAIM REJECTIONS – 35 U.S.C. § 103

The Examiner rejected Claims 5-9 and 18-22 under 35 U.S.C. §103(a) as allegedly unpatentable over Bare in view of McCloghrie (USP 6,304,901). The Examiner also rejected Claims 10, 11, 23 and 24, under 35 U.S.C. §103(a) as allegedly unpatentable over Bare in view of Huang (USP 6,301,244). These rejections are respectfully traversed.

The Examiner did not allege that McCloghrie or Huang cures the deficiencies of Bare pointed out above regarding claims 1-4, 12-17, and 25-28. Accordingly, claims 5-11 and 18-24 are allowable for at least the reasons set forth above regarding the discussion of 35 USC §102. Each of the claims 5-11 and 18-24 specify a different patentable feature that is independently distinguishable over Bare in view of McCloghrie and over Bare in view of Huang.

For example, claims 6 and 19, lines 3 and 4, recite “creating one connected group node for any pairs of interfaces.” Although the Examiner alleged that this is taught by Bare, and cited Fig. 1, column 13, line 55 through column 14 line 40, FIG. 29, column 54, lines 5-20, these passages deal with the transfer of packets and tags, and not with

designating Connected Groups as nodes. Considering that Bare does not disclose a concept of a Connected Group space, Bare cannot disclose how to formulate the nodes of that space.

As another example, regarding claims 8 and 20, the interfaces used for the connected groups are in a forwarding state of the spanning tree. In contrast, Bare specifically teaches away from this in column 4, lines 52-67. In particular, column 4, lines 52-63 discuss the disabling of redundant paths by the spanning tree. Column 4, line 64 starts with "another problem the spanning tree...", thereby implying that the disabling of the redundant paths is a problem (because it limits the bandwidth by precluding "the aggregation of the available bandwidth" column 4, lines 56 and 57). Consequently, in contrast to claims 8 and 20, Bare teaches that using "all paths in the network" in column 6, line 27, and not just those having nodes of Connected Groups formed with interfaces in the forwarding state.

The remaining differences between the claims and the cited references will not be argued at this time to expedite the prosecution.

CONCLUSIONS AND MISCELLANEOUS

The Applicants believe that all issues raised in the Office Action have been addressed and that allowance of the pending claims is appropriate. Entry of the amendments herein and further examination on the merits are respectfully requested.

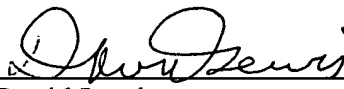
The Examiner is invited to telephone the undersigned at (408) 414-1213 to discuss any issue that may advance prosecution or any other issues related to this application.

No fee is believed to be due specifically in connection with this Reply. To the extent necessary, Applicants petition for an extension of time under 37 C.F.R. § 1.136. The Commissioner is authorized to charge any fee that may be due in connection with this Reply to our Deposit Account No. 50-1302.

Respectfully submitted,

HICKMAN PALERMO TRUONG & BECKER LLP

Dated: June 25, 2003



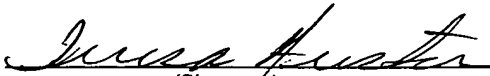
David Lewis
Reg. No. 33,101

1600 Willow Street
San Jose, California 95125-5106
Telephone No.: (408) 414-1080
Facsimile No.: (408) 414-1076

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Non-Fee Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

on June 26, 2003
(Date)

by 
(Signature)